

L 13566-66

ACC NR: AP6001231

single ternary compound  $\text{Pb}_2\text{Sb}_8\text{Te}_{11}$  is formed in the system at 587C. The composition corresponding to the peritectic point coincides with the composition of the compound. The ternary compound forms a eutectic with a solid solution based on  $\text{Sb}_2\text{Te}_3$  at an  $\text{Sb}_2\text{Te}_3$  content of 61 mole % and a temperature of 582C. The existence of regions of solid solutions of  $\text{Sb}_2\text{Te}_3$  (up to 3 mole %) in  $\text{PbTe}$  and solutions of  $\text{PbTe}$  (up to 2 mole %) in  $\text{Sb}_2\text{Te}_3$  at the same temperature was established. Some properties of the compound  $\text{Pb}_2\text{Sb}_8\text{Te}_{11}$  were determined: m.p. 587C;

$\mu$  51.0 kg/mm;  $\chi$   $6.1 \times 10^{-3}$  cal/cm sec g;  $\delta$  504 ohm<sup>-1</sup> cm<sup>-1</sup>. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07, 11 / SUBM DATE: 28Jul65 / ORIG REF: 006 / OTH REF: 005

Card 2/2

88919

S/050/61/000/002/003/004  
B117/B209

3.5000

AUTHOR:

Popova, M. A.

TITLE:

The conditions for the evolution of surfaces of the Earth's  
absolute potential averaged over time

PERIODICAL:

Meteorologiya i gidrologiya, no. 2, 1961, 20-24

TEXT: The author of the present paper made an attempt to apply the hydrodynamic equations averaged over time in their complete form to the surfaces of the geopotential as averaged over a synoptic period (4 - 8 days). The derivation of the equation of motion averaged over time resembles the derivation of dynamic equations of a turbulent motion, as is known from Refs. 1 and 4. From the theory of turbulent motion it follows that the values of the coefficients  $K$  and  $K'$  increase when the averaging scale is magnified with progressing time ( $K$  and  $K'$  characterize the vertical and the horizontal exchange). The values  $K = 10^5 \text{ cm}^2 \text{ sec}^{-1}$ ,  $K' = 10^9 \text{ cm}^2 \text{ sec}^{-1}$  are assumed for macroturbulence. The  $K$  and  $K'$  values were determined for averaging over 4 - 8 days. The equations resulting from the semi-empirical theory of

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The conditions for the evolution... .

turbulence were employed in the calculation of K and K'. The values to be introduced in these formulas were taken from the charts for the synoptic period from August 10 to 14, 1958. Calculations were made for a level of 700 millibars. During the time under consideration, a cyclone with its center near Moscow lay over the European part of the USSR. K and K' were calculated for this region at nine points of observation that were more or less uniformly distributed around this center. A mean value between  $10^5$  and  $10^6 \text{ cm}^2 \text{ sec}^{-1}$ , rather tending towards  $10^5$ , was found for K. This value may be considered true. The results of horizontal exchange were enhanced. Under consideration of the monthly average and of the data obtained by other scientists and other methods, a characteristic value of  $5 \cdot 10^9 \text{ cm}^2 \text{ sec}^{-1}$  was assumed for K'. Presumably, this is the upper limit of the average over the period. The mean local variations of the geopotential in a synoptic period, just like in the case of individual processes, were found to depend chiefly on the horizontal advection  $\Omega$  and on the horizontal wind divergence. A formula for the forecast of these evolutionary variations was derived:  $\delta \bar{H} = 1.5(\bar{u}_x + \bar{v}_y) + [-1.6\bar{\Delta}\bar{H} + (\bar{v}_x - \bar{u}_y)]$  (10).

Forecasts on the evolution of cyclones and anticyclones were calculated  
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The conditions for the evolution ...

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by this formula on the base of data for five periods for a level of 700 millibars. Following the suggestion of Ref. 10, the quantities in (10) were averaged over a surface the dimensions of which correspond to those of a baric formation. The results of this forecast as determined by formula (10) were satisfactory although the stability problem is not quite clear in some cases. It is stated that the problem was solved in a simplified way. This fact and the positive results from (10) are indicative of a possible application of this formula and of improved future forecast schemes. However, the practical realization of these forecasts for local variations of the geopotential because of voluminous calculations will be possible only with the help of electronic computers. Moreover, thorough investigation should be made as to whether the forecast scheme has to be completed by elements that depend on heat supply and frictional force. These may become considerably important during the individual periods and have a distinct effect upon the circulation of the current and of the subsequent periods. Of course, attention must be paid in every individual case to the rational evaluation of the wind observations. The following persons are mentioned in the paper:

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The conditions for the evolution ...

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N. Ye. Kochin, Ye. S. Lyapin, A. S. Monin, K. A. Reshetnikova,  
A. S. Grigor'yeva. There are 1 table and 12 references: 11 Soviet-bloc.

Card 4/4

18 7500

24594

S/137/61/000/005/048/060  
A006/A106

AUTHORS: D'yachenko, S.S.; Palatnik, L. S., and Popova, M. A.

TITLE: The effect of heat treating conditions on the structure of 20 XM-V  
(20 KhM-L) steel

PERIODICAL: Referativnyi zhurnal. Metallurgiya, no. 5, 1961, 11, abstract 5176  
("Tr. Khar'kovsk. politekhn. in-ta", 1959, v. 25, 91-97")

TEXT: The authors carried out metallographical, electron-microscopical and roentgenographical investigations of the microstructure and composition of the carbide phase depending on tempering temperature of 20 KhM-L steel containing (in %): C 0.15, Si 0.3, Mn 0.61, S 0.026, P 0.039, Cr 0.5, Mo 0.55. After tempering at 400°C the carbide phase consists mainly of carbide with  $Cr_{23}C_6$  structure and a small amount of  $Fe_2Mo_2C$  and  $Fe_3C$  carbides. With higher temperatures of tempering the  $\alpha$ -solid solution is impoverished of alloying elements which is accompanied by an increased amount of  $Fe_2Mo_2C$  carbides. Above 570°C the cementite dissolves and in the ferrite grains  $Mo_2C$  carbide is singled out.

E. R.

[Abstracter's note: Complete translation]

Card 1/1

SEMENKO, V.Ye.; VLADIMIROVA, M.G.; POPOVA, K.A.

Culture of *Chlorella pyrenoidosa* in pulsed light. Fiziol. rast. 7  
no.4:459-465 '60. (MIRA 13:9)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy  
of Sciences, Moscow.  
(Algae) (Light--Physiological effect)

POPOVA, M.A.

Using ultrahigh-frequency apparatus as a single treatment for acute and chronic parodontitis of the upper part of the teeth.  
Stomatologiya 35 no.5:9-13 S-O '56 (MLRA 10:4)

1. Iz stomatologicheskogo otdeleniya Tsentral'noy polikliniki  
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.  
(TEETH--DISEASES) (ELECTRICITY IN DENTISTRY)

POPOVA, M. A.

Berliner, B. I. and Popova, M. A. "Clinical-statistical characteristics of the causes of invalidism resulting from gun shot wounds, based on data from the Tashkent VMA," Sbornik trudov Nauch.-issled. in-ta ortopedii, travmatologii i protezirovaniya (M-vo zdravookhraneniya Us SSR), Vol. I, 1949, p. 27-32

SO: U-4934, 29 Oct. 53, (Letopis 'Zhurnal 'nykh Statist., No. 16, 1949).

POPOVA, M. A.

Berliner, B. I. and Popova, M. A. "Certain results in the treatment of disabled soldiers of the Great Patriotic War in the Uz SSR for 1946 and the basic measures taken in the first post-war Five-Year Plan," Sbornik trudov Nauch.-issled. in-ta ortopedii, travmatologii i protezirovaniya (N-vo zdravookhraneniya Uz SSR), Vol. I, 1948, p. 15-25

SO: U-4934, 29 Oct. 53, (Letopis 'Zhurnal 'nykh Stateli, No. 16, 1949).

DARVOYD, T.I.; GUREVICH, M.A.; NOVICHKOVA, S.M.; POPOVA, M.A.

System TlBr - TII. Zhur. neorg. khim. 10 no.2:462-466 F '65.  
(MIRA 18:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy  
institut redkometallicheskooy promyshlennosti. Submitted Aug.  
28, 1963.

ABRIKOSOV, N.Kh.; YELAGINA, Ye.I.; POPOVA, M.A.

Study of the system  $\text{PbTe} - \text{SbTe}_3$ . Izv. AN SSSR. Neorg. mat.  
1 no.12:2151-2153 D '65. 2 3 (MIRA 18:12)

1. Institut metallurgii im. A.A. Baykova i Moskovskiy institut  
tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Submitted  
July 28, 1965.

POPOVA, Mayya Nikiforovna; GARF, S.E., kand. tekhn. nauk,  
retsenzent; KOVALEV, K.V., dots. kand.tekhn.nauk, otv.red.;  
DEREVYANCHENKO, R.M., red.

[Methods for solving problems on the strength of materials]  
Metody resheniia zadach po soprotivleniiu materialov.  
Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 248 p.  
(MIRA 18:1)

S/033/60/037/02/011/013  
E032/E914

AUTHOR: Popova, M. D.

TITLE: Curvature of the Paths of Certain Meteors During Their Motion  
Through the Earth's Atmosphere ✓

PERIODICAL: Astronomicheskii zhurnal, 1960, Vol 37, Nr 2, pp 352-353  
(USSR)

ABSTRACT: The curvature of the paths of meteors is sometimes noted during visual observations. However, this is a relatively rare phenomenon. On November 12, 1956 at 19 hr. 33 min. the present author succeeded in obtaining a photograph of such a meteor. The meteor was observed visually at the same time. The photograph was obtained with a Zeiss camera with a 12 cm objective (1:4.5) on an Astro-Agfa plate (unsensitised). Microdensitometer examination of the meteor track photograph showed that the change in the direction of the meteor was real and was found to be of the order of 12.5 deg. It is suggested that the curvature of the track was connected with the form of the meteoric body, i.e. a kind of boomerang effect ✓

Card1/2

POPOVA, M.E.

Technological characteristics of impoverished coals. V. D. Frishberg, Z. P. Balaabanova, M. E. Popova, and T. G. Berkhatina, *Sov. 1954, No. 2, 116-119; Refrat. Zhur., Khim.* 1956, Abstr. No. 13863. —The existing methods of detn. of properties of impoverished coals are inadequate. Only Donets coals can be evaluated by their index of clinkering; Pechorsk and Kuznets coals have a heterogenic petrographic compn. and contain 45-65% vitrain matter; hence, they cannot be evaluated by the index of clinkering. Evaluation of properties of impoverished coals should be based on their petrographic compn., on the character of trace components, and, 1st of all, on the amt. of the fraction rich in a homogeneous vitrain matter on which depend their clinkering properties. Lustrous Donets coals are the best impoverishing addns. contg. a large amt. of homogeneous vitrain with a max. clinkering capacity. Only those impoverished coals that contain a vitrain material that does not appear to clinker should be referred to as non-caking coals. The properties of impoverished coals and the tendency to clinker are best characterized by the degree of swelling. The method of calcn. of charges of impoverished coals should be based on the detn. of swelling and on the investigation of trace components. J. Mloszewski.

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POPOVA, M.E.

1024. INVESTIGATION OF CAKING OF COALS. Pernitina, K.S. and Popova, M.E. (Stal (Steel, Moscow), 1954, (3), 775-781; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (2), 4699). A microscopic examination of changes in coal during thermal decomposition is reported. Coal was heated with air excluded, in pieces and in the crushed state, to temperatures ranging from 300 to 750°C, and sections were prepared close to the heating surface of the semi-coke formed. It was established that only vitrain, a vitrainized main mass of coal and spores go completely into a plastic state. Fusainized micro-components and xylene are inert in the caking process and similar to mineral impurities. Xylo-vitrain, xylo-vitrainized and slightly fusainized attrition particles have low caking power and cannot combine in the same group as with the vitrainized substance. Study of the caking of the grains of coal revealed the character of the connexion between the grains in the process of caking. Junction takes place only over the surface of contact, and not only at points of contact between the fluid main mass of the coal and the non-caking grains, but also at the boundaries of the plastic masses formed from vitrains of different degrees of metamorphism.

POPOVA, M. F.

Proteins

Dependence of galvanotaxis of Paramecium upon metabolism and protein state. Trudy  
Inst. morf. zhiv. no. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

POPOV, I. V.

"Measuring Certain Functional and Biochemical Characteristics of Transverse-Striated Muscles After Denervation and Tenotomy." *Dokl Biol Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov*, 17 Sep 54. (VI, 7 Sep 54)

SO: Sum 432, 29 Mar 55

~~##~~ POPOVA, M. F.

✓ The correlation between some physicochemical and functional properties of Amoeba. M. F. Popova (Inst. Biol. Phys., Acad. Sci. U.S.S.R., Moscow). *Biofizika* 1, 23-0(1956).—*Amoeba proteus* was used as test animal. The action of the following factors were studied: CdCl<sub>2</sub> (I) ( $10^{-3}$  and  $5 \times 10^{-4}$ ); cysteine (II) ( $10^{-3}$ ); adenosine-triphosphate (III) ( $10^{-3}$  and  $5 \times 10^{-4}$ ); Cl<sub>2</sub>BrCOO- (IV) ( $5 \times 10^{-4}$  and  $5 \times 10^{-5}$ ); Na choline (V) ( $10^{-4}$  and  $10^{-5}$ ); the variations of temp., elec. and mech. stimulation on viscosity and rate of movements of *Amoeba*. The viscosity was detd. by the method of centrifugation. An increase of temp. from +5 to +25° was followed by a decrease in viscosity and the response to the min. elec. stimulation. An increase of temp. from +25 to +35° produced the reverse effect. III in  $10^{-4}$  concn. diminished the viscosity and increased the response to elec. stimulus and the rate of movement whereas in concn.  $2 \times 10^{-3}$  and higher it caused an increase in viscosity followed by corresponding decrease in the response to elec. stimulus and the rate of movement. These effects of III are reversible (washing with water restored the amebas to normal). IV increased the viscosity and decreased the response to stimulants irreversibly. This was proved by the absence of the usual effect of temp. on viscosity (cf. above). A similar response was produced by III with amebae dying at temps. higher than +20 and +23°. The effect of  $10^{-4}$  I consisted of a sharp increase of viscosity, cessation of movements, and considerable decrease to stimulants; the amebae could move only at +15 to +20°. The addition of II restored the amebae completely in a few min., including the response to temp. A. V. T.

POPOVA, M. F.

[illegible]

U.S. DEPARTMENT OF AGRICULTURE

Murheev, V.A.; Popova, M.F.

Calomel electrodes were applied as usual. As with muscles, the undamaged end was positively charged. The e.m.f. varied between 20-320 microvolts. The application of the salts:  $\text{CdCl}_2$ ,  $\text{CuSO}_4$ , and  $\text{AgNO}_3$ , and adenosinetriphosphoric acid to the one end of threads diminished the e.m.f. The details of similar expts. with strips of gelatin and agar gave similar results. According to Harris and Sookne (C.A. 35, 4214), Mikhailov (Physico-chemical Basis of the Technology of Hide, Moscow, p. 187, 1949), and Pasynskii and Blokhina (C.A. 47, 4029b) the stretching and coagulation of proteins is followed by change in the isoelectric points of proteins. The stretching produces the lowering, and the contraction the increase of the isoelectric points of proteins.

A. V. Tolstoukhov

2/2

*POPOVA, M.F.*  
MUZHEYEV, V.A.; POPOVA, M.F.

Some data on the nature of biopotentials. Biofizika 1 no.8:741-753  
'56. (MLRA 9:12)

1. Institut biologicheskoy fiziki Akademii nauk SSSR, Moskva.  
(ELECTROPHYSIOLOGY) (MUSCLE)

POPOVA, M. F.

EXCERPTA MEDICA Sec.2 Vol.10/4 Physiology, etc. Apr 57

1769. POPOVA M. F. Dept. of Phys., Lomonossov State Univ., Moscow. \*Alteration of some properties of striated muscle after denervation and tenotomy (Russian text) FIZIOL. Z. 1956, 42/11 (1977-980) Tables 2

After denervation, the content of free SH groups increased together with the decrease of weight of skeletal muscle in albino rats; the reverse changes occurred during regeneration. The contractility of isolated fibres was increased during regeneration. Increase of free SH groups occurred also with developing atrophy after tenotomy.

Simonson - Minneapolis, Minn.

POPOVA, M.F.

Ribonucleic acid content of a denervated muscle. Biol. eksp. biol.  
i med. 56 no.9:61-64 S '63. (MIRA 17:10)

1. Iz laboratorii gistologii (zav. - prof. A.N. Studitskiy) Instituta morfologii zhivotnykh AN SSSR, Moskva. Predstavlena deystvitel'nyy chlenom AMN SSSR A.I. Bakulevym.

POLOVA, M.F.

Effect of denervation on the posttraumatic regeneration of  
the muscle. Dokl. AN SSSR 157 no. 2:436-438 J1 '64.  
(MIRA 17:7)

1. Institut morfologi i khimii imeni Severtsova AN SSSR.  
Predstavleno akademikom F.I. Skryabinym.

POPOVA, M.F.

Role of a plastic condition, caused by denervation in muscular  
reactions to radiation. Dokl. AN SSSR 148 no.1:223-226 Ja '63.

(MIRA 16:2)

1. Institut morfologii zhivotnykh im. A.N. Severtsova AN SSSR.

Predstavleno akademikom A.N. Bakulevym.

(RADIATION—PHYSIOLOGICAL EFFECT) (MUSCLES—INNERVATION)

STUDITSKIY, A.N.; POPOVA, M.F.

Biological protection of skeletal and muscular tissue against  
injury by ionizing radiation. Dokl.AN SSSR 145 no.1:198-201  
Jl '62. (MIRA 15:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR.  
Predstavleno akademikom A.N.Bakulevym.  
(X RAYS--PHYSIOLOGICAL EFFECT) (MUSCLE) (BONES)

POPOVA, M.F.

Biochemical analysis of the reaction of muscle tissues to  
radiation injury in case of a mechanical trauma. Dokl.  
AN SSSR 143 no.2:444-447 Mr '62. (MIRA D:3)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR.  
Predstavleno akademikom K.I.Skryabinym.  
(X RAYS—PHYSIOLOGICAL EFFECT)  
(REGENERATION(BIOLOGY))  
(MUSCLE)

*POPOVA, M. F.*

(e)  
Action of Regeneration Processes in Various Tissues and Organs upon the  
After-Effects of a Radiation-Induced Trauma

A. N. Studitsky, M. F. Popova and O. N. Romanovskaya

The effect of a preliminary mechanical injury upon the sensitivity of tissue to X-irradiation has been studied.

Contrary to the well-known data on the high sensitivity of actively proliferating tissues (e.g. embryonic ones) to the action of ionizing radiation, regenerative tissues were shown by the present authors to be highly resistant to X-irradiation.

X-irradiation with a dose of 2000 r sharply depresses regenerative properties of bone, muscle, haemopoietic and other tissues. If the tissues, however, are first exposed to a mechanical injury, they are less radiosensitive. The regeneration of the rat gastrocnemius muscle, developing from pre-treated muscle tissue, withstands local X-irradiation with a dose of 2000 r without much effect. Regenerating haemopoietic organs are also found to possess high radioresistance. On the basis of the experimental data obtained, a principle of biological radiation protection is set forth according to which tissues are able to increase their resistance to radiation-induced injury under the conditions that cause a shift of the metabolism towards anaerobiosis.

*Laboratory of Histology, Institute of Animal Morphology, USSR Academy of Sciences, Moscow*

report presented at the 2nd Intl. Congress of Radiation Research,  
Harrogate/Yorkshire, Gt. Brit.: 7-11 Aug 1962

28962  
S/020/62/145/001/018/018  
B144/B138

27 2400

AUTHORS: Studitskiy, A. N., and Popova, M. F.

TITLE: Biological protection of muscular tissue against ionizing radiation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 1, 1962, 198-201

TEXT: The effect of ionizing radiation is studied in regenerates from autotransplanted muscle pulp. The test included 6 series of 7-9 white rats each whose mm. gastrocnemii were extirpated, crushed, reimplanted, and then irradiated with 2000 r 24 hrs, 3, 7, and 14 days after operation. These intervals coincide with stages called latent, mitotic, amitotic and slightly differentiated regenerative phases. The rats were killed 21 days after the operation when the newly formed motor end plates in the regenerate enable a stimulation of the sciatic nerve to be answered by contraction. In the control animals, which were operated and irradiated but not subjected to reimplantation of muscle pulp, the regenerate from the 2-3 mm long proximal stumps showed hardly any signs of contraction on direct or nerve stimulation. Microscopic examination of regenerates

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S/020/62/143/002/020/022  
B144/B138

27.240°

AUTHOR:

Popova, M. F.

TITLE:

Biochemical analysis of the reaction of muscular tissue to radiation injuries combined with mechanical trauma

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 2, 1962, 444 - 447

TEXT: Increasing posttraumatic regeneration after irradiation by stimulating the plastic state of the muscle tissue is studied. This was defined previously by A. N. Studitskiy (Ref. 16: Eksperimental naya khirurgiya myshts, M., 1959; Ref. 17: II gistol. konfer., M., 1959, p. 243; Ref. 18: A. N. Studitskiy, R. P. Zhenevskaya, O. N. Rummyantseva, Ceskoslov. Morfol., 4, no. 4, 331 (1956)). In nonirradiated muscle tissue crushing and autotransplantation had proved most effective. Regeneration is compared in gastrocnemii of white rats, which were autotransplanted after crushing or transected 1 day after irradiation of one hind leg with a PYU-1 (RUP-1) x-ray apparatus, dose 2000 r. Results are compared with those of 3 control groups which underwent 1) transection; 2) autotransplantation; 3) irradiation without trauma. Regeneration intensity was judged from RNA content  
Card 1/3 X

Biochemical analysis of ...

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in the regenerate, which was determined histochemically and biochemically. Parallel studies of morphological changes were conducted in cooperation with Wang Hsiu-Pi (Ref. 25: Tez. dokl. I Konfer. po vopr. tsito- i gisto-khimii, M., 1960, p. 58). Variations in RNA content as well as morphological changes indicate that regeneration, which is otherwise markedly delayed after irradiation, sets in earlier and is more intensive after autotransplantation of the crushed muscle. This is explained by the development of a highly plastic state of the tissue resulting in the rapid overcoming of radiation injuries. There are 2 figures and 25 references: 22 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: A. Portela, Anat. Res., 136, no. 2, 260 (1960); E. B. Darden, Am. J. Physiol., 198, 4, 709 (1960); Th. I. Haley, A. M. Flesher, N. Komesu, Am. J. Physiol., 193, no. 2, 355 (1958).

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A. N. Severtsov of the Academy of Sciences USSR)

PRESENTED: October 16, 1961, by K. I. Skryabin, Academician  
Card 2/3

Biochemical analysis of ...

SUBMITTED: October 12, 1961

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Card 3/3

X

DAVIDSON, G.O.; PROKHOROVA, L.B.[translator]; MOROZOV, V.N.[translator];  
TURCHIN, V.F. [translator]; POPOVA, M.F., red.

[Biological effects of whole-body gamma radiation on human beings]  
Biologicheskie posledstviia obshchego gamma-oblucheniia cheloveka.  
Pod red. M.F.Popovoi. Moskva, Atomizdat, 1960. 167 p.

(MIRA 14:8)

1. Johns Hopkins University. Operations Research Office.  
(RADIOACTIVE FALLOUT) (GAMMA RAYS—PHYSIOLOGICAL EFFECT)

POPOVA, M.F. (Moskva, B-312, 1-y Akademicheskii pr., 32, kv.78)

Some biochemical properties of regenerating skeletal muscle.  
Ark. anat. gist. i embr. 39 no. 12:60-64 '60. (MIRA 14:2)

1. Laboratoriya gistologii (zav. - prof. A.N. Studitskiy)  
Instituta morfologii zhivotnykh im. A.N. Severtsova AN SSSR.  
(MUSCLE--REGENERATION)

POPOVA, N. F., HSIU-PI, WANG

"Regeneration of the Skeletal Musculature After Radiation Damage."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

Laboratory of Histology of the Institute of the Morphology of Animals, Academy of Sciences USSR, Moscow.

USSR / General Biology. Physical and Chemical Biology. B-1

Abs Jour: Ref Zhur-Biol., No 10, 1958, 42703.

Author : Popova, M. F.

Inst : ~~Not given.~~

Title : The Interrelationship of Some Physico-Chemical and  
Functional Properties of Amoeba Protoplasm.

Orig Pub: Biofizika, 1956, 1, No 1, 23-29.

Abstract: A parallelism was observed between alteration of viscosity and irritability and mobility of Amoeba proteus. With change of temperature from 50° to 28°, protoplasm viscosity decreases, mobility increases, and a lowering of the threshold of stimulation by electric current occurs. When the

Card 1/2

ANDRYUSHCHENKO, F.K.; POPOVA, M.G.; TULYA, Ye.Ya.

Kinetics of the reduction of iron oxide with the use of iron  
powders. Izv. vys. ucheb. zav. khim. i khim. tekhn. 2 no.2:219-224  
'59. (MIRA 12:9)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.  
Kafedra tekhnologii elektrokhimicheskikh proizvodstv.  
(Iron oxides)

POPOVA, M. G.

2. Active iron composition for the negative electrode of an  
alkaline battery. K. K. Andryashchenko, M. G. Popova,  
N. N. Goryunova, V. N. Kharlamov, F. F. Tomashovskii and  
M. G. Stcharenko. U.S.S.R. 109,136, Dec. 25, 1967.  
Addn. to U.S.S.R. 108,404. The heat treatment of Fe  
oxide and powd. Fe mixt. is carried out at a temp. above  
540° in air to reduce the relative amt. of Fe oxide.

11 Distr: LELJ

M. Hosch

*[Handwritten signature]*

5 (1, 2)  
AUTHORS:

Andryushchenko, F. K., Popova, M. G., SOV/153-2-2-15/31  
Tulya, Ye. Ya.

TITLE:

1. Reduction Kinetics of Iron Oxide in the Presence of Iron Powder (O kinetike vosstanovleniya okisi zheleza v prisutstvii zheleznykh poroshkov)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 219-224 (USSR)

ABSTRACT:

Since 1952 the method of the so called "reduction in solid phase" (Refs 1, 2) gained a leading position in the production of the active iron masses for the negative electrode of the alkaline accumulator. It is based on the reduction of iron oxide down to magnetic iron oxide in the presence of iron powders without the supply of oxygen. Before the theoretical fundamentals of this process were finally formulated and before its kinetic rule had been explained, numerous advantages of this method enforced its introduction into the working practice. Experts endeavored to explain these processes (Refs 3-8). If in the system here discussed, water steam,  $Fe_2O_3$  and iron powder exist in amounts which do not exceed the stoichiometrical

Card 1/3

1. Reduction Kinetics of Iron Oxide in the Presence of Iron Powder

SOV/153-2-2-15/31

amount (for iron an amount that corresponds to  $\text{Fe} + 4 \text{Fe}_2\text{O}_3 \rightarrow 3 \text{Fe}_3\text{O}_4$ ), the powder is bound to be oxidized to  $\text{Fe}_3\text{O}_4$  within a certain length of time. Iron oxide for its part, has to be reduced to  $\text{Fe}_3\text{O}_4$  (Refs 7, 9). The present information gives experimental results for the purpose of explaining the above mentioned rules with a natural moisture content in iron. The average figures of the results obtained are shown in figure 1. The continuous line corresponds to heating, the interrupted line to cooling. The amount of moisture determined in the experiments just recently, were taken into consideration. The reduction method was applied with exclusion of air, in order to determine finally the rôle of water. Powder of electrolytic iron was used with  $S = 695 \text{ cm}^2/\text{g}$  (according to Tovarov). The plant where the experiment was carried out is shown in figure 2. After an experiment of three hours duration, iron oxide (according to a chemical analysis) was completely reduced and the iron powder was oxidized. Figure 3 shows the Debye graphs. Further experiments served the purpose of

Card 2/3

1. Reduction Kinetics of Iron Oxide in the  
Presence of Iron Powder

SOV/153-2-2-15/31

making the results applicable in working practice, and were carried out in air atmosphere. Cast iron powder was used. The table (p 223) shows the results. The reduction procedure is given. Figure 4 gives data on the phase composition of the reduced oxide in test II. Finally, the authors deal with a detailed explanation of the factors limiting or accelerating the reduction process of iron oxide in the presence of iron powder. Professor L. S. Palatnik collaborated in the analysis of the X-ray structure of the products. There are 4 figures, 1 table, and 10 references, 8 of which are Soviet.

ASSOCIATION: Khar'kovskiy politekhnicheskii institut imeni V. I. Lenina;  
Kafedra tekhnologii elektrokhimicheskikh proizvodstv (Khar'kov  
Polytechnic Institute imeni V. I. Lenin; Chair of  
Technology of Electrochemical Products)

SUBMITTED: December 9, 1957

Card 3/3

POPOVA, M. G.

22999 K mekhanizmy katodnogo osazhdeniya nikelya. Trudy khar'k. Khim. -  
tekhnol. In-ta In. Kirava, Vyp. 7, 1949, C. 53-57

SO: LETOPIS' NO. 31, 1949

ANDRYUSHCHENKO, F.K.; POPOVA, M.G.; TULYA, Ye.Ya.

Kinetics of the reduction of iron oxide in the presence of iron  
powders. Part 2. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1:108-  
115 '61. (MIRA 14:6)

1. Khark'kovskiy politekhnicheskij institut imeni V.I.Lenina,  
kafedra tekhnologii elektrokhimicheskikh proizvodstv.  
(Iron oxide) (Reduction)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><b>Coppering and staining of Aluminium.</b> O. F. Levitzkaya and M. G. Popyva. (<i>Ukrainskii Khimicheskii Zhurnal</i> (<i>J. Chim. Ukraine</i>), 1933, 8, 381-385; <i>Brit. Chem. Abs.</i>, 1934, [B], 679).—[In Ukrainian, with German summary.] Adherent films of nickel, but not of copper, can be deposited electrolytically on aluminium. Aluminium may be coppered by first depositing a thin layer of nickel, and then copper-plating as usual.—S. G.</p>																			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION																			
MATERIALS INDEX										PROCESS INDEX									
SUBJECT INDEX										AUTHOR INDEX									
SUBJECT INDEX										AUTHOR INDEX									

1ST AND 2ND CROSSL										3RD AND 4TH CROSSL																																																	
PROCESSES AND PROPERTIES INDEX																																																											
BC																																																											
<p>Clustering and etching of aluminum. O. F. KAVYUKHA and M. G. POROVA (Ukrain. Chem. J., 1933, 8, 281-282).—Adherent films of Ni, but not of Cu, can be deposited electrolytically on Al. Al may be coppered by first depositing a thin layer of Ni, and then Cu-plating as usual.</p> <p>R. T.</p>																																																											
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																											
FROM LITERATURE																																																											
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1ST AND 2ND ORDER		PROCESS AND PROPERTY INDEX		3RD AND 4TH ORDER	
4					
<p><b>Thick electrolytic nickelplating.</b> I. S. Ya. Pavchuk and M. G. Popova. <i>Trudy Akad. Nauk. Khim. Tekhnol. Inst. im. S. M. Kirova</i> 8, 113-24 (1946). Adhesion of thick Ni plate to Fe is improved decidedly by heating the plated sample to 600-900°, owing to mutual diffusion and alloying. The Ni deposits were produced on sheet Fe 0.3-5 mm. thick, in <math>\text{NiSO}_4 \cdot 7\text{H}_2\text{O}</math> 350 g./l.; NaCl 1 g./l.; <math>\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}</math> 180 g./l.; acidity corresponding to 10-15 ml. 0.1 N NaOH per 10 ml. temp. 70-80°, c.d. 10-15 amp./sq. dm. (1) With an intermediate 0.002-0.003 mm. Cu layer, adhesion of Ni 0.02-0.03 mm. remained poor (in bending tests) after 1-hr. heating in H<sub>2</sub> at up to 700° but was sharply improved at 900°. At the same time, the Cu layer was no longer visible on micrographs; a granular layer of the ternary alloy appeared in its place. The raising of the temp. to 850-900° had no further effect. Thicker Cu layers require longer heating. (2) Without an intermediate Cu layer, Ni deposits as thin as 0.02 mm. proved poorly adherent on bending; micrographs showed a gap between the Fe and the Ni. Satisfactory adhesion of deposits up to 0.2-mm. thick was attained after 5-min. heating at 900°. The thickness of the alloy layer formed at 900°, 0.05 mm., could be measured directly after 10 hrs. treatment; hence, the thickness of that layer after 5 min. could be calculated to be 0.004 mm.; this is sufficient to ensure perfect adhesion. No alloying takes place below 600°, even on prolonged heating; at 600°, no less than 2-3 hrs. are necessary, at 700-800° one hr. is enough. While heating at up to 900° embrittles the Ni, the deposit is perfectly ductile after heating at 900°. (3) The treatment does not necessarily require a H<sub>2</sub> atm. and can be carried out in air. The thin oxide film formed at 700° can be removed with emery paper; at 900°, the oxide film is hard and resists abrasion. Slow heating up from room temp. to 300° (10-20 min.) is essential for gradual outgassing. The article should then be transferred quickly to a furnace kept at 900°, to avoid too long exposure to 600-800° where the Ni is embrittled; cooling down from 900° should be fast. (4) In boiling NaOH, 80 g./l., Ni and the heat-treated Ni-plated Fe lost only 5 g./sq. m. in 250 hrs., as against 341 g. for Fe. Prior to the loss of wt. the Ni (but not the Fe) shows a passing slight gain of wt. In boiling NaOH satd. with NaCl, in boiling <math>\text{KClO}_4</math> (1200 g./l.) with 450 g./l. <math>\text{CaCl}_2</math>, and in ammoniacal <math>\text{Na}_2\text{CO}_3</math> at 60-70°, the treated Ni plates behaved exactly like pure Ni.</p>					
N. Thon					
<p>ASB-15A METALLURGICAL LITERATURE CLASSIFICATION</p>					

1ST AND 2ND COLUMNS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH COLUMNS	
4					
<p><b>Cathodic crystallization of nickel.</b> S. Ya. Pasechnik and M. G. Popova. <i>Trudy Khar'kov. Khim. Tekhnol. Inst. im. S. M. Kurasa</i> 5, 104-12(1945).—Pitting in electrolytic Ni deposits is somewhat reduced but not entirely eliminated by addn. of oxidants such as <math>\text{NaNO}_2</math>, <math>\text{KClO}_4</math>, <math>\text{KMnO}_4</math>, <math>\text{MnO}_2</math>, or <math>\text{H}_2\text{O}_2</math>. The tendency to pitting is independent of the preliminary preps. of the basis metal and is the same on Fe, Cu, Sn, Pb, and Ni. Reversal of the current at regular intervals, e.g., every 10 min. for 10-20 sec. at c.d. 10 amp./sq. dm., helps prevent pitting. With sol. anodes (in the presence of chlorides in the electrolyte) pitting is considerably heavier than with passive anodes; the effect is attributed to the small amt. of highly-oxidized anode sludge formed on insol. or only partly sol. anodes. This explanation is confirmed by the observation that enclosing the anodes in cloth bags, thus preventing transfer of that sludge to the cathode, resulted in pitted deposits. With the bags eliminated, pit-free deposits were produced in the same electrolyte (<math>\text{NiSO}_4 \cdot 7\text{H}_2\text{O}</math> 350 g./l., <math>\text{H}_2\text{SO}_4</math> 10 g./l., temp. <math>80^\circ</math>, cathodic c.d. 10 amp./sq. dm., anodic c.d. 5 amp./sq. dm.). Filtration or sedimentation of the electrolyte also resulted in pitting. Only the sludge formed on a passive anode is effective in preventing pitting; the sludge loses its efficacy on standing owing to decompn. of the unstable higher oxides. In the presence of chloride, very high anodic c.d. is necessary to ensure sufficient passivity of the Ni anodes, with 0.3 g./l. <math>\text{NaCl}</math> over 20 amp./sq. dm. That the suppression of the pitting is not due to anodic O was demonstrated with Pt anodes, which proved ineffective. On the other hand, pitting disappeared with Pb anodes; this is taken as proof of the detg. role of <math>\text{Ni}^{2+}</math> and <math>\text{Ni}^{3+}</math> ions, which can be formed on Pb anodes but not on Pt. With Ni anodes, pitting can be prevented if the electrolyte is kept free from chloride (not over 0.1 g. <math>\text{NaCl}/\text{l.}</math>), and the anodic current efficiency below 95%. The anode should appear coated with a golden-brown film of higher Ni oxides. As there is no sludge of the kind formed with highly sol. anodes, no diaphragms are necessary. N. Thon</p>					
<p>ASS-51A METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>1ST COLUMN 2ND COLUMN 3RD COLUMN 4TH COLUMN 5TH COLUMN 6TH COLUMN</p>					

POPOVA, M.G.,

A. P. MASHOVETS, Russ. 46,410, Mar. 31, 1936.

DROZDOV, Leonid Nikolayevich; POPOVA, M.I., red.; SMIRNOVA, M.I., tekhn.red.

[Textbook for practical work in agriculture] Uchebnoe rukovodstvo  
k prakticheskim rabotam po sel'skomu khoziaistvu. Izd.2., ispr.  
i dop. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR,  
1958. 215 p.

(Agriculture)

(MIRA 12:4)

PONOMAREV, Vasilii Petrovich, kand.biolog.nauk; POPOVA, M.I., red.;  
KREYS, I.G., tekhn.red.

[School excursions to places of agricultural production]  
Shkol'nye ekskursii v sel'skokhoziaistvennoe proizvodstvo;  
iz opyta raboty. Moskva, Gos.uchebno-pedagog.izd-vo M-va  
prosv.RSFSR, 1960. 156 p.

(School excursions)

(MIRA 14:1)

(Agriculture--Study and teaching)

PELEVIN, V.I.; POPOVA, M.I., red.; MAKAROV, V.V., red.; KOZLOVSKAYA,  
M.D., tekhn. red.; KORNEYEVA, V.I., tekhn. red.

[Conservation] Ob okhrane prirody; sbornik statei. Moskva,  
Uchpedgiz, 1962. 205 p. (MIRA 16:6)  
(Conservation of natural resources)

POPOVA, M. I.

POPOVA, M.I. : "The problem of mastering the grammatical elements of the language by preschool children (the mastery of gender agreement)." Moscow Order of Lenin and Order of Labor Red Banner State U imeni M.V. Lomonosov. Moscow, 1956. (Dissertations for Degree of Candidate in Pedagogical Sciences).

SO: Knizhnays Letonsis' No. 22, 1956

KAPLAN, S.M., kand. sel'skokhozyaystvennykh nauk; POPOVA, M.I., agronom.

Experiment in spring harrowing of winter wheat. Zemledelia 6 no.5:  
56-60 My '58. (MIRA 11:6)

(Wheat) (Harrow)

POPOVA, M. I.

Grammatical elements of language in the speech of preschool children.  
[with summary in English]. Vop.psikhol. 4 no.3:106-117 My-Je '58  
(MIRA 11:8)

1. Kafedra psikhologii Moskovskogo gosudarstvennog universiteta.  
(SPEECH)  
(RUSSIAN LANGUAGE--GENDER)

18

Crystallization of thion sulfate from solutions containing sodium carbonate. G. P. Luchinskii and M. A. Popova. *J. Applied Chem. (U. S. S. R.)* 12, 1664-7 (in French, 1967) (1969).--Polythionates are formed on boiling thio-sulfate solns.; this produces in the crystals a yellowish shade owing to liberation of S by the decomn. of polythio-nates. The tint is prevented by crystn. from a  $\text{Na}_2\text{CO}_3$  soln., which destroys polythionates. The hydrates of  $\text{Na}_2\text{S}_2\text{O}_3$  and  $\text{Na}_2\text{CO}_3$  in a molten state, form a mixt. The fusion curve of the system  $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O} - \text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$  has one eutectic point. Definite compds. are not formed in the system. The presence of chalk prevents the yellow-ing of  $\text{Na}_2\text{S}_2\text{O}_3$  when crystd. from a soln.

A. A. Bochtlingk

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
COMMON ELEMENTS																										COMMON FABRICATED METS																									
<p>CA</p> <p>The preparation of iron oxide for obtaining caustic by the Löwig method. S. N. Gremyachkin and M. I. Popova. <i>J. Chem. Ind. (U. S. S. R.)</i> 17, No. 2, 8-11 (1940).—When <math>\text{Fe}_2\text{O}_3</math> is repeatedly ignited with small amts. of soda to activate it for the Löwig process, the particle size becomes uniform, the d. decreases and the soly. in HCl increases, but the porosity does not change greatly. This indicates that the activation consists in a change to <math>\gamma\text{-Fe}_2\text{O}_3</math>. The amt. of soda required for this change shows that it occurs through intermediate formation of the ferrite. The same degree of activation can be obtained by ignition of <math>\text{Fe}_2\text{O}_3</math> once with 20% added soda. H. M. Leicester</p>																																																			
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PROCESSIES AND PROPERTIES INDEX																																																																																																			
<p><b>BC</b></p> <p><b>B-I-8</b></p> <p>Cryosynthesis of uranophosphate from solutions containing sodium carbonate. G. P. LUTSCHINSKI and M. I. POROVA (J. Appl. Chem. Russ., 1939, 12, 1934—1937).—Yellowing of crystals of <math>\text{Na}_2\text{H}_2\text{O}_7 \cdot 5\text{H}_2\text{O}</math> is due to liberation of N from polythionates (I) formed as a result of by-reactions; this effect is prevented by adding <math>\text{Na}_2\text{CO}_3</math>, which decomposes (I), to the solution. Fused <math>\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}</math> and <math>\text{Na}_2\text{H}_2\text{O}_7 \cdot 5\text{H}_2\text{O}</math> are miscible in all proportions; compound formation is not observed in this system.</p> <p>R. T.</p>																																																																																																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																																																																			
<table border="1"> <thead> <tr> <th colspan="13">SOURCES</th> <th colspan="13">EXTRACTS</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th> <th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>																										SOURCES													EXTRACTS													1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
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1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p><i>ea</i></p> <p style="text-align: right;">7</p> <p><b>Determination of the concentration of industrial sulfuric</b></p> <p>acid aerosols. G. P. Luchinskii and M. I. Popova. <i>Zavodskaya Lab.</i> 8, 552-4(1939).—The <math>H_2SO_4</math> aerosol is passed at a rate of 0.5 l./min. through a Bunsen flask into a glass spiral so designed that all particles over <math>5\mu</math> are pptd. and then through a bath absorber contg. a mixt. of 10 ml. <math>N NaOH</math> and 5 ml. of 2% aq. soap soln. The spiral and absorber are rinsed and the washings are titrated. The method is particularly suitable for the analysis of the exhaust gases from towers where <math>SO_2</math> is not present. If <math>SO_2</math> and oxides of N are present these should be detd. in a parallel detn. <i>See also 55; Z. Kamich</i></p> <p>Determination .....</p>																																																			
<p>ABR-51A METALLURGICAL LITERATURE CLASSIFICATION</p> <p>1000 1000000</p> <p>1000 1000000</p>																																																			

12

*C-1*

A rapid method for determining proteins in milk. M. I. Popova. *Trudy Leningrad Inst. Soos. Torgov.* 1940, No. 5, 44-53; *Khim. Refert. Zhur.* 6, No. 9, 85 (1941).— Treat 10 cc. of milk with 0.1 N NaOH to a faint pink color with phenolphthalein, add 1-2 cc. of neutral 40% formalin (which binds the NH<sub>2</sub> groups of the protein mol.) and titrate with 0.1 N NaOH. The percentage of protein in the milk is the no. of cc. of the 0.1 N alkali used multiplied by 1.88. The max. error is 1%. For accurate analyses the proteins must be detd. by the Kjeldahl method. W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Country : USSR  
CATEGORY : Cultivated Plants. Grains. M  
ABS. JOUR. : RZBiol., No. 21, 1958, No. 95917  
AUTHOR : Kaplan, S.M.; Popova, M.I.  
INST. : ---  
TITLE : An Experiment in Fallowing Winter Wheat  
Sowing during Spring  
ORIG. PUB. : Zemledeliye, 1958, No. 5, 58-60  
ABSTRACT : No abstract

CARD: 1/1

1-17 AND 1-18, 1950 (1951)										1-19 AND 1-20, 1950 (1951)									
PROCESSING AND PROPERTY INDEX																			
<div style="position: absolute; top: 10px; left: 10px; font-size: 2em; font-weight: bold;">BC</div>		<div style="position: absolute; top: 10px; right: 10px; font-size: 1.5em; font-weight: bold;">B-II-9</div>																	
		<p><b>Influence of the gaseous medium on hot vulcanization.</b> B. V. Buzov and M. K. Porova (<i>J. Gen. Chem. Russ.</i>, 1934, 4, 688—692).—The ratio combined S/free S in rubber vulcanized at 125—135° in various gases increases in the order: <math>SO_2 &lt; H_2O &lt; H_2 &lt; air &lt; EtOH &lt; N_2 &lt; CO_2 &lt; CO_2 + H_2O &lt; CH_3OH &lt; H_2 + H_2O &lt; vac. &lt; NH_3 &lt; NH_3 + H_2O &lt; H_2S &lt; H_2S + H_2O</math>; inhibition of <math>C_{60}H_{12}O_{16}</math> by the product varies in the reverse order. The free S content and the content of <math>CHCl_3</math>-sol. substances fall by 50% when the pressure falls from 760 to 75 mm. during vulcanization in air. R. T.</p>																	
ASTM-LLA METALLURGICAL LITERATURE CLASSIFICATION																			
SOURCE SYMBOL										SOURCE SYMBOL									
SOURCE #										SOURCE ONE ONE									
SOURCE #										SOURCE ONE ONE									

SUBJECT AND INDEX		CLASSIFICATION AND PROPERTY	
<p><b>Influence of the gaseous medium on vulcanization</b>            B. V. Bulkov and M. K. Pygova. <i>J. Gen. Chem.</i> (U. S. S. R.) 4, 1940 (211954).—Samples of rubber contg. 6.5% S and 0.4% <math>MgCO_3</math> were vulcanized in dry <math>H_2S</math>, <math>NH_3</math>, <math>H_2SO_4</math>, and <math>CO_2</math> and in 40% <math>CH_3OH</math>, alc. and <math>H_2O</math> in glass tubes by means of boiling xylene, and were then tested for combined S and for swelling in <math>AcOAm</math>. The tabulated results show that the medium influences the rate of vulcanization and the phys. properties of the vulcanizate. Only <math>H_2S</math> and <math>NH_3</math> increase the rate of vulcanization and reduce the solv., while all the other agents affect only 1 of the 2 factors. The phys. properties of rubber are impaired most by <math>H_2O</math>, to some degree by alc. and to a still less degree by air. Tests of the vulcanization of light crepe with 5% S at reduced pressures by boiling in xylene as above for 2 hrs. showed that vulcanization is accelerated and the solv. of rubber diminished with increase in the vacuum. Thus, the coeff. of vulcanization increased from 0.0072 at 700 mm. to 0.0297 at 25 mm. The product could not be tested for swelling, because it was porous. C. B.</p>			
<p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>REGION 17-11-194</p>		<p>REGION 17-11-194</p>	
<p>REGION 17-11-194</p>		<p>REGION 17-11-194</p>	

PAYKIN, D.M.; STAROSTIN, S.G.; MENDE, P.F.; KUZNETSOV, K.P.;  
POPOVA, M.I.; PESHKOV, V.G.

Mist spraying of chlorophos against the ~~shield~~ bug *Eurygaster*  
*integriceps*. Zashch. rast. ot vred. i bol. 7 no.2:20-21  
F '62. (MIRA 15:12)

(Chlorophos) (Eurygasters)  
(Spraying and dusting)

POPOVA, M.I.; ZVEREV, V.A.

Use of torpedo from detumating blast hole for cleaning oil-  
wall filters. Nefteprom. delo no.2:173'63 (OCRA 1737)

1. Krasnokamskoye neftepromyslovoye upravleniye.

PAPORKOV, Mikhail Alekseyevich; POPOVA, M.I., red.; DRANNIKOVA, M.S.,  
tekhn.red.

[School excursions into nature; from the experience of a teacher]  
Shkol'nye pokhody v prirodu; iz opyta raboty uchitelia. Moskva,  
Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 198 p.  
(MIRA 14:4)

(School excursions)

(Nature study)

GOL'DBERG, V.N.; POPOVA, M.M.

Angiography in the diagnosis of tumors and cysts of the mediastinum.  
Vrach.delo no.12:1299-1303 D '59. (MIRA 13:5)

1. Klinika torakal'noy khirurgii (zav. - prof. N.M. Amosov) Ukrain-  
skogo nauchno-issledovatel'skogo instituta tuberkuleza.  
(ANGIOGRAPHY) (MEDIASTINUM--TUMORS)

*Popova, M. M.*

USSR/General Division. Problems of Teaching.

A-7

Abs Jour : Ref Zhur-Biologiya, No 20, 1957, 85126

Author : M. M. Popova

Inst :

Title : The City School's Tie to the Kolkhoz.

Orig Pub : Biol. v skhole, 1957, No 1, 53-56

Abstract : No abstract.

Card 1/1

POPOVA, M. M., CAND MED SCI, "PRACTICAL APPLICATION OF  
ANGIOCARDIOGRAPHY IN CONGENITAL CARDIAC FAILURE." KHAR'KOV,  
1960. (KHAR'KOV STATE MED INST). (KL, 2-61, 219).

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POPOVA, M.M.

Contact of a city school with the collective farm. Biol.v shkole  
no.1:53-56 Ja-F '57. (MLRA 10:5)

1.Uchitel'nitsa shkoly No. 351, goroda Moskvyy.  
(Zvenigorod District--Agriculture--Study and teaching)

POPOVA, M.M.

"Some Peculiarities in the Distribution of Radioactive Calcium in the Osseous Tissue of Rats Exposed to Common X-ray Irradiation" p. 118, in the book Experience in the Use of Radioactive Isotopes in Medicine R. Ye. KAVETSKIY and I.T. SHEVCHENKO, published by the Gosmedizdat Publishing House of the UKRAINIAN SSR, KIEV 1955, represents medical transactions of a conference held in KIEV from 19-20 January 1954.

So: 1100235

POPOVA, M. M.

Journal of the Iron and Steel Institute  
Vol. 176  
Apr. 1954  
Analysis

(2)  
Determination of Niobium Carbide in Steels. M. M. Popova  
and A. P. Piatonova. (Zakodskaya Laboratoriya, 1950, 18,  
(10), 1132-1135). (In Russian). In the investigation reported,  
the conditions for the separation of niobium carbide and  
metallic niobium with the aid of hydrofluoric acid were  
studied, and a method for determining niobium existing as  
the carbide in steels was developed.—S. K.

11-5-54

md

POPOVA, M.M.

Popova, Malcheva, M., "Investigation in Determining the Direction of the Meridan and Other Similar Problems." p.1 (GODISHNIK, MATEMATIKA I FIZIKA, Vol. 47, No. 1, 1950/51-1951/52, Sofiya.)

SO: Monthly List of East European Accessions, Vol. 3, No. 3, Library of Congress, March, 1954, Uncl.

POPOVA, M.M.

Practical use of angiocardiology in congenital heart defects. Vrach.  
delo no.9:901-903 S '59. (MIRA 13:2)

1. Kafedra rentgenologii i radiologii (zaveduyushchiy - dotsent N.F.  
Zarkovich) Kiyevskogo meditsinskogo instituta i kafedra torakal'noy  
khirurgii (zaveduyushchiy - prof. N.M. Amosov) Kiyevskogo instituta  
usovershenstvovaniya vrachey.  
(ANGIOGARDIOGRAPHY) (HEART--ABNORMITIES AND DEFORMITIES)

LASHKO, N.F.; OREKHOV, G.N.; POPOVA, M.M.

Metastable aging processes in heat-resistant pearlitic  
steel. Fiz. met. i metalloved. 12 no.3:417-423 S '61.

(MIRA 14:9)

(Steel, Heat-resistant--Hardening)

GAVRILYUK, V.S., kand.tekhn.nauk; POPOVA, M.N., inzh.

Errors in the theory of the mechanical strength of metals during  
crystallization. Svar.proizv. no.4:30-32 Ap '62. (MIRA 15:3)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.  
(Thermal stresses) (Crystallization)

Ререр, А. М.

7  
3  
L9685 (Russian.) Preparing Thorium Sulfides and Determining  
Some of Their Properties. Prigotovleniye i nekotorye svoystva  
sul'fidov toriya. G. V. Samsonov and M. N. Petrova.  
Zhurnal Obshchey Khimii, v. 27, Jan. 1957, p. 56.

Producing Th sulfides by direct combination of Th and S. ThS  
and Th<sub>2</sub>S<sub>3</sub> are the most stable phases in the Th-S system.  
Determination of melting points and microhardness.

DM  
2/5

POPOVA, M. N.

49685 (Russian.) Preparing Thorium S: lides and Determining  
Some of Their Properties. *Prigotovlenie i nekotorye osobennosti  
sul'fidov toria*. G. V. Samsorov and M. N. Popov. *Zhurnal Obshchey Khimii*, v. 27, Jan. 1957, p. 9-8.  
Producing Th sulfides by direct combination of Th and S. ThS  
and ThS<sub>2</sub> are the most stable phases in the Th-S system.  
Determination of melting points and microhardness.

3

PM/MT

POPOVA, M.N.; SEMSHKIN, G.B.; TSIKIN, A.N.

Change in the electric properties of alkali halide crystals due  
to prolonged exposure to a constant electric field. Izv. AN SSSR  
Ser. fiz. 29 no.1:82-85 Ja '65.

(MIRA 18:2)

L 32815-65 EWT(1) IJP(c)  
ACCESSION NR: AP5004528

S/0048/65/029/001/0082/0085

AUTHOR: Popova, M.N.; Semushkin, G.B.; Tsikin, A.N.

TITLE: Changes in the electric properties of alkali halide crystals under prolonged application of a dc field /Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.1, 1965, 82-85

TOPIC TAGS: alkali halide, single crystal, tenebrescence, electric conductivity, aging process

ABSTRACT: The aging of KCl and KBr crystals in fields from 50 to 1000 V/cm was investigated at temperatures from 350 to 650°C (400 to 500° for KBr). Metal foil electrodes were carefully attached to the crystals, and the contact was considered satisfactory provided no trace of oxidation of the electrode could be seen after the experiment. The current versus time curves showed four distinct regions: an initial region of constant current, a region of rapidly increasing current, another region of nearly constant current, and a final region of rapidly increasing current leading to breakdown. All four regions of the current curve were clearly marked in

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ACCESSION NR: AP5004528

the case of the KBr crystals, and tenebrescence was either absent or very weak. When tenebrescence was observed it appeared simultaneously throughout the crystal with no trace of tenebrescence front. With the KCl crystals only the first three regions of the current curve were ordinarily observed, and these were less sharply distinguished than in the case of KBr. Tenebrescence was regularly observed but different crystals behaved differently in this respect. In some crystals the coloring appeared simultaneously throughout the crystal as in KBr, and in others a region containing a considerable concentration of F centers formed at the cathode and grew toward the anode. Discharge currents decaying slowly with time were observed with all crystals when the aging was interrupted at any stage and the electrodes short circuited. Some but not all of the results can be interpreted in terms of the electrolytic theory of G.Heiland (Z.Phys.128,144,1950); it is suggested that two processes are involved, one of which is described by Heiland's theory, while the other requires further study. Orig.art.has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00/--Jan65

ENCL: 00

SUB CODE: SS

NR REF SOV: 001

OTHER: 001

Card 2/2

L 21430-66 FRD/ET(1)/EBC(2)-2/7/ET(2)/SSA(B) IJF(c) YG  
ACC NR: AP6011498

SOURCE CODE: UR/0386/66/003/007/0301/0303

AUTHOR: Korobkin, V. V.; Leontovich, A. M.; Popova, M. N.; Shchelev, M. Ya.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskii institut Akademii nauk SSSR)

TITLE: Dynamics of the field and generation frequency in a giant pulse of a laser with passive shutter

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 7, 1966, 301-303

TOPIC TAGS: ruby laser, laser pulsation, laser modulation, electromagnetic field

ABSTRACT: The authors have previously investigated (ZhETF v. 48, 78, 1965) the dynamics of the field and the generation frequency experimentally for a laser in the free mode. This paper reports a similar investigation of the dynamics of the field and the generation frequencies in the giant pulse of a ruby laser with passive shutter. The passive shutter used was a cell with a solution of cryptocyanine in ethanol. The initial transmission of the cell was 15% for 6943 Å wavelength. The cell was placed between the flat mirror with reflection coefficient 98% and a ruby crystal 120 mm long and 11.5 mm in diameter. The second mirror, located 50 cm from the first, had a reflection coefficient of 30%. The laser action, initiated

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ACC NR: AP6011498

on the end face and on the 30% mirror, bleached the cryptocyanine solution and a giant pulse developed. The pulse energy was 0.5—0.8 J and the duration was 12' to 15 nsec at the half-power level. The time sweep of the field pattern and the time spectra of the generations were with the aid of an electron-optical converter (EOC) operating in the slit-scanning mode and providing a resolution of 0.5 nsec. Photographs are presented of the scanned generation field on the end of the crystal, of the development of the generation field in the far zone, and the time sweep of the giant pulse as observed with a Fabry-Perot interferometer. The results show that individual small regions, spaced 0.1—1 mm apart, are in operation on the end surface. In each such region is observed a pulse of duration 1.8—4 nsec. The subdivision of the generation region into individual sections can be attributed to the operation of higher-order modes and to the inhomogeneity of the crystal. The beam divergence increases in time from 1.2—1.5' to 20', and this variation of the field must be taken into account in calculations of the power of the field at the focus of a lens. The lasing frequency shifts toward the violet side during the course of generation. This shift amounts to 0.012—0.015  $\text{cm}^{-1}$ , and the line width at each instant is  $\sim 0.01 \text{ cm}^{-1}$ . The observed change in the generation field of the giant pulse of a laser with passive shutter is in good qualitative agreement with the results of the theoretical paper of V. S. Letokhov and A. F. Suchkov (ZhETF v. 50, no. 6, 1966), which pertains to the case of instantaneous Q-switching and not

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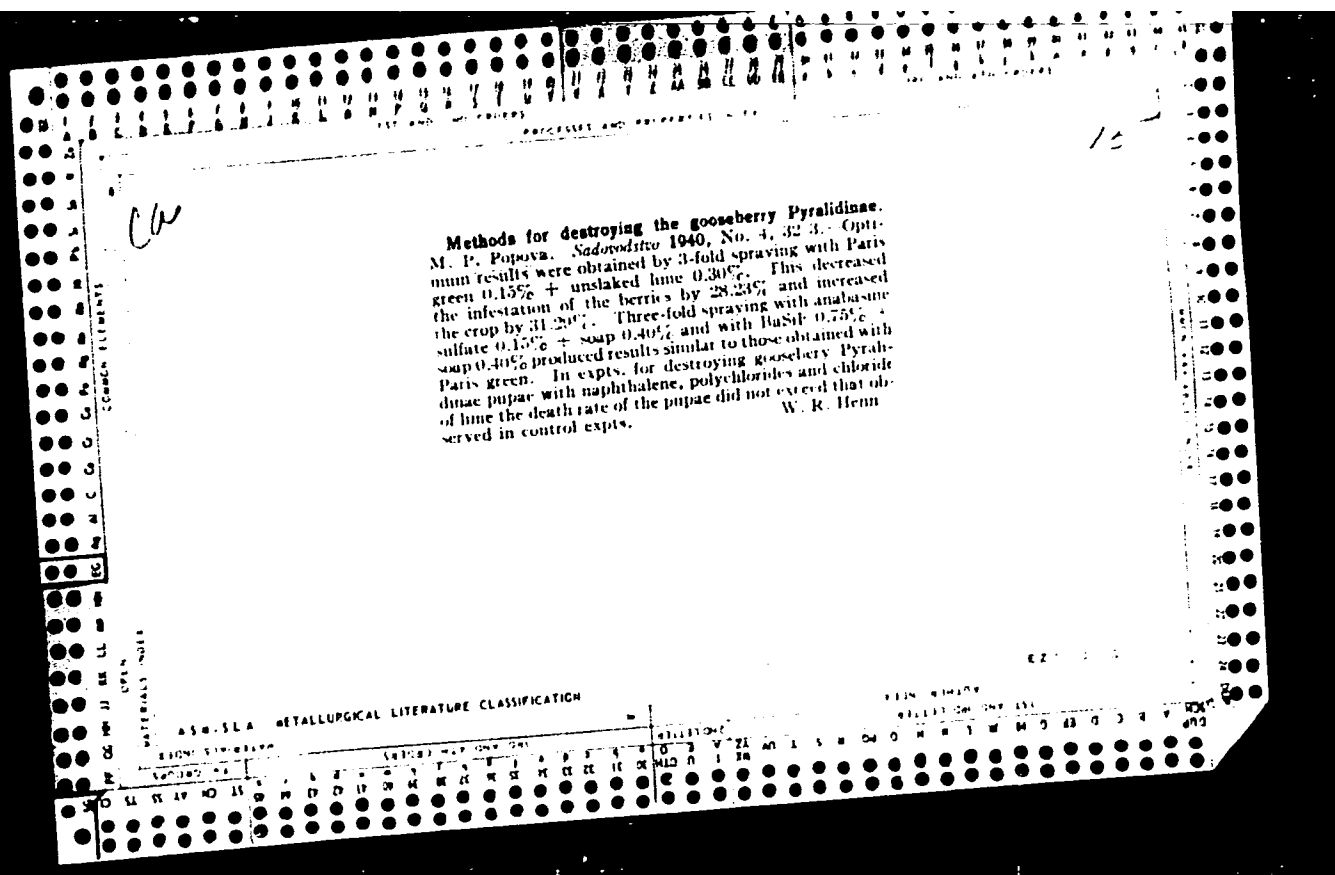
L 21430-66  
ACC NR: AP6011498

to the case of a passive shutter. There are no calculations as yet for passive shutters. The change in the generation field is evidence of the change in the transverse of the mode index from low values of the order of 1 to a value of the order of 50. If the axial index does not change, then the increase in frequency,  $\approx 0.3 \text{ cm}^{-1}$ , which is larger by one order of magnitude than the measured value  $0.02 \text{ cm}^{-1}$ . The cause of the measured frequency shift is still unclear. The authors thank M. D. Galanin, V. S. Letokhov, and A. F. Suchkov for discussions. Orig. art. has: 3 figures. [02]

SUB CODE: 20/ SUBM DATE: 22Feb66/ ORIG REF: 002/ OTH REF: 001  
ATD PRESS: 4221

Card

3/3 out



POPOVA, ... [2]

POPOVA, ... and LAROKAYA, O. -Pests and Disease of Fruit and Berry Crops and Their Control. Moscow Worker, Moscow, 1946, 103 pp. 45r. P 1

SO: SIRA SI-90-53, 15 December 1953

1. FOPOVA, M. P., SOBOLEVA, V. P.
2. USSR (600)
7. Vrediteli i Bolezni Plodovo-Yagodnykh Kul'tur (Pests and Diseases of Fruit and Berry Crops), 263 pp, Moscow, 1951.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

1971, 10. 1971, 10. 1971

10. 1971  
10. 1971  
10. 1971

VERBODEN TOEGANG HANDELSRECHTEN EN VERBODEN (PROMOTIE  
DIENST) OF THE HANDELSRECHTEN EN VERBODEN, 1971. 1971. 1971.  
1971. 1971. 1971. 1971.

21- P. 1971. 1971. 1971

AT HEAD OF TITLE-PAGE: 1971. 1971. 1971. 1971. 1971. 1971.  
SCHWANNSTREKEN HANDELSRECHTEN EN VERBODEN.

POPOVA, M. P. Cand Agr Sci -- (diss) "Effect of the degree and character of salification of soils upon the growth and condition of tree and shrub species under irrigated conditions of the lower Povolzh'ye." Mos, 1958. 18 pp (Acad Sci USSR. Soil Inst im V. V. Dokuchayev), 150 copies (XL, 14-58, 115)

Author: ZHUR  
 Title: GENERAL ASPECTS OF ZOOLOGY IN THE  
 USSR and the Middle East.  
 435. JOURN: Zhur-Zhurnal, No. 4, 1959, No. 4

Author : Fedorov, M.P.  
INST. : Moscow Fruit and Berry Exp. Station  
TITLE : On the question of the effect of the  
temperature of the soil on the growth  
of the plants.

ORIG. PUB.: *Epid. nauchno-tekhn. Zhurn. plod-pyrodn. otryn.* 80., 1959, No. 2, 26-28

[illegible]

CARD : 1/3

AUTHOR :  
INST. :  
TITLE :

**CIA-RDP86-00513R001342430003-1"**

ORIG. PUB.:

ABSTRACT : after a year -- May 3rd - 9th, 1956. The number of damaged buds in the control increased from 20.0 to 46.7%, and there was a decrease in the variants of the experiment as compared with the control: I - 73.5%, II - 86.2%, III - 96.5%. The total number of buds on one bush rose on an average of 9% in the control, in variants I and II - 97%, in III - 81%. The currants were divided into three groups according to the extent of damage to the bud caused by

CARD: 1213

POPOVA, M. P.

Dissertation: "Determination of Zinc Phosphide and Its Stability in Food Products During Storage and Cooking." Cand Biol Sci, Second Moscow State Medical Inst, Moscow 1953.

SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR, (W-30928 ~~W-30928~~)

ZHARIKOV, N.M.; LEVIT, V.G.; POPOVA, M.S.; RATNER, I.O.; STANKEVICH, L.A.;  
SHMAONOVA, L.M.

State of schizophrenia treatment based on data of an  
outpatient study. Zhur. nevr. i psikh. 64 no.6:911-918 '64.  
(MIRA 17:12)

1. Institut psikiatrii AMN SSSR, Moskva.

POPOVA, M.S.

Possibilities for expanding the assortment of valuable commercial fishes on fish farms, as exemplified by Sengileyskaya Reservoir. Trudy sov. ikht. kom. no.14:157-160 '62. (MIRA 15:12)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.  
(Sengileyskaya Reservoir--Fish culture)

POPOVA, M.S.

Materials on the ecology of commercial fishes in Sengileyskaya  
Reservoir, Stavropol Territory. Vop. ekol. 5:176-178 '62.  
(MIRA 16:6)

1. Stavropol'skiy sel'skhozaystvennyy institut.  
(Sengileyskaya Reservoir--Fishes)

SHLYAKHTIN, Ye.I.; ZHOROVA, A.G.; ANANCHENKO, M.V.; GRISHUTIN, V.G.;  
IVANOV, V.I.; DORONIN, A.A.; POPOVA, M.S., inzh.; TARASENKO, I.I.;  
ROMANOV, A.I.; ZHUKOV, A.V.; LAPTEV, G.I., inzh.

Who should perform the forwarding and carrier services?  
Zhel. dor. transp. 45 no.6:42-45 Je '63. (MIRA 16:7)

1. Zamestitel' nachal'nika stantsii Smolensk Moskovskoy dorogi po gruzovoy rabote (for Shlyakhtin). 2. Nachal'nik pogruzkontory stantsii Smolensk Moskovskoy dorogi (for Zhorova). 3. Zaveduyushchiy gruzovym dvorom stantsii Smolensk Moskovskoy dorogi (for Ananchenko). 4. Nachal'nik tovarnoy kontory stantsii Smolensk Moskovskoy dorogi (for Grishutin). 5. Zaveduyushchiy konteynernoy ploshchadkoy stantsii Smolensk Moskovskoy dorogi (for Ivanov). 6. Sekretar' partiynogo byuro stantsii Smolensk Moskovskoy dorogi (for Tarasenko). 7. Stantsiya Smolensk Moskovskoy dorogi (for Doronin, Romanov, Popova). 8. Upravlyayushchiy Smolenskimi oblastnymi avtotrestom (for Zhukov).  
(Freight and freightage)

POPOVA, M.S.

MBR., Pharmacological Dept., Union Chem-Pharmaceutical Inst., im. Ordzhonikidze,

Moscow, -1939-41-.

"Changes of the Blood Picture under the Influence of Liver Preparation," ibid.,

4, No. 3, 1941.

POPOVA, M.S. (Moskva)

Some characteristics of higher nervous activity in patients with  
the paranoid form of schizophrenia at different periods of its  
course. Zh. nevropat. psikiat. Korsakov 63 no.3:392-398 '63  
(MIRA 17:1)

POPOVA, M.S.

Some disturbances in the neurodynamics in patients with the paranoid form of schizophrenia with a prolonged course of the process.

Trudy Inst. vys. nerv. deiat. Ser. patofiziol. 7:29-40 '60.

(MIRA 14:4)

(SCHIZOPHRENIA) (REFLEXES)

POPOVA, M.S.

Materials on the morphology and biology of *Chalcalburnus chalcoides schischkovi* Drensky acclimatized in Sengileyskaya Reservoir, Stavropol Territory. Vop. ikht. 1 no.3:468-480 '61. (MIRA 14:11)

1. Kafedra zoologii Stavropol'skogo sel'skokhozyaystvennogo instituta, Stavropol' krayevoy.  
(Sengileyskaya Reservoir--Carp)